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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
08/857,273	05/16/1997	PETER A. RONZANI	07171083-008	3991

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EXAMINER

WU, XIAO MIN

ART UNIT PAPER NUMBER

2629

DATE MAILED: 09/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	08/857,273	RONZANI ET AL.	
	Examiner	Art Unit	
	XIAO M. WU	2629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 July 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) See Continuation Sheet is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 21,23-29,32-34,36,38,40,42-48,51-55,57,58,86-93,98,99,101,102,104,105 and 107 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>7/3/2006</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 21, 23-28, 32-34, 36, 38, 40, 42-47, 51-55, 57-58, 87-89, 91-93, 98-99, 101-102, 104-105 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ohnsorge (U.S. Patent No. 5,485,504), Spitzer (WO 93/18428), Nathanson (U.S. Patent No. 4,010,322) and Suwa (EP 0 438 362).

As to claim 21, 25, 28, 32, 33, 40, 44, 51, 52, 58, 104-105, Ohnsorge discloses a portable communication device (or a video-telephone housing) comprising: a portable housing (Figs. 1-2); a central processing unit (5, Fig. 10); a wireless receiver (col. 2, lines 26-27) within the housing for receiving audio-video data; a display module (e.g. LCD 6) attached to the housing; It is noted that Ohnsorge does not specifically disclose that the liquid crystal display having an active matrix circuit and an array of at least 300,000 pixel electrodes, a light source for backlighting the display panel, a display driver circuit, and a battery carried by the telephone housing for powering the transceiver, the receiver, the display, the light source, and the display driver circuit, and a lens magnifying an image displayed on the display panel for viewing by a

Art Unit: 2629

user, wherein the active matrix display panel, the light source and the lens are located on a single optical axis extending along a line of sight of the user.

Spitzer is cited to teach an active matrix display device includes a display driver for driving the display panel and a light source for providing red, green and blue backlight to the display panel and an array of at least 300,000 pixel electrodes (see page 4, lines 27-32).

Nathanson is cited to teach a portable telecommunicator device which comprises a power supply (30) for powering the display, transceiver, receiver, light source and circuit within the housing. Nathanson further discloses a lens being located in front of the display for enlarging the display image.

Suwa further discloses portable display device including a lens magnifying an image displayed on the display panel for viewing by a user, wherein the active matrix display panel, the light source and the lens are located on a single optical axis extending along a line of sight of the user (see Fig. 6 and 8A).

It would have been obvious to one of ordinary skill in the art to have used an active matrix liquid crystal of Spitzer for the liquid crystal display of Ohnsorge because the active matrix liquid crystal display can provide sharper image than the regular liquid crystal display (e.g. passive type LCD).

Also, it would have been obvious to one of ordinary skill in the art to have modified Ohnsorge as modified with the features of the power source and lens as taught by Nathanson so as to provide a mobile function of the telephone unit and to view an enlarge image from a small portable display device.

Art Unit: 2629

Furthermore, it would have been obvious to one ordinary skill in the art to have modified Ohnsorge as modified with the features of the light source, LCD and lens in a single optical axis as taught by Suwa because Suwa provide a compact design for a small display located in front of the user.

With respect to the newly added claims 87-89, 91-93, 95-97, it would have been obvious to have used different kinds of sensors in the head-mounted display device of Schoolman as modified because they can provide work related data to the user.

As to claims 24, 43, Spitz discloses that the display device is head mounted display.

As to claims 34, 53, Spitz discloses the display panel has an array of transistors that is formed with a silicon-on-insulator (SOI) structure (Figs. 30A-30B).

As to claim 54, it would have been obvious to include a reflector positioned around the light source so as to maximize the light intensity.

As to claims 36, 55, Spitz discloses that the display is a head-mounted display which would be a small size of the display (see page 3, lines 26-33).

As to claim 38, 57, it is well known in the art to use a flexible ribbon cable for connecting the housing and the display module.

As to claim 45, Spitz discloses the display pixel lines could be 400 lines.

As to claims 27, 46, the cholesteric liquid crystal element is well known liquid crystal materials for use in LCD display device.

As to claims 101-102, Spitz discloses an imaging device (e.g. CCD for tracking the eyes) coupled to the housing.

Art Unit: 2629

3. Claims 29, 48 are re rejected under 35 U.S.C. 103(a) as being unpatentable over Ohnsorge (U.S. Patent No. 5,485,504) in view of Spitzer (WO 93/18428), Nathanson (U.S. Patent No. 4,010,322) and Suwa (EP 0 438 362) as applied to claims 21 and 40 above, and further in view of Shennib (US Patent No. 5,197,332).

As to claims 29 and 48, it is noted that Ohnsorge, Spitz and Nathanson do not disclose a port coupled to the housing for receiving a memory card. Shennib is cited to teach headset communication device including a port coupled to the housing for receiving a memory card (25, Figs. 1a and 1). It would have been obvious to one of ordinary skill in the art to have modified Ohnsorge as modified with the memory card within the housing as taught by Shennib so as to receive external information data.

4. Claims 86, 90, 94 and 107 are re rejected under 35 U.S.C. 103(a) as being unpatentable over Ohnsorge (U.S. Patent No. 5,485,504) in view of Spitzer (WO 93/18428), Nathanson (U.S. Patent No. 4,010,322) and Suwa (EP 0 438 362) as applied to claims 21, 23-29, 32-36, 38-40, 42-48, 51-55, 57-58, 87-89, 91-93, 98-99, 101-102, 104-105 above, and further in view of Suzuki (EPA 0 551 781 A1).

Note the discussion of Ohnsorge, Spitzer, Nathanson and Suwa above. Spitzer further discloses that the display could be used as a head-mounted display. Thus, it would have been obvious to one of ordinary skill in the art to have combined Ohnsorge's wireless audio-video portable display device into a head-mounted display as taught by Spitz because the head-mounted would provide a hands free display device. Furthermore, it is noted that Ohnsorge, Spitzer and Nathanson do not disclose a servo for allowing adjustment of the position of the

Art Unit: 2629

display relative to a user eyes. Suzuki is cited to teach a head mounted display device similar to Schoolman. Suzuki discloses a servo (Fig. 1) for allowing adjustment of the position of the display relative to a user's eyes. It would have been obvious to one of ordinary skill in the art to have modified Ohnsorge as modified with the features of the servo as taught by Suzuki because Suzuki's head mounted display can be fitted into different users.

Response to Arguments

5. Applicant's arguments with respect to claims 21, 23-29, 32-34, 36, 38, 40, 42-48, 51-55, 57-58, 86-93, 98-99, 101-102, 104-105, 107 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Art Unit: 2629

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to XIAO M. WU whose telephone number is 571-272-7761. The examiner can normally be reached on 6:30 am to 4:00 pm.

The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

x.w.

September 16, 2006



XIAO M. WU
Primary Examiner (SPE)
Art Unit 2629

Continuation of Disposition of Claims: Claims pending in the application are 21,23-29,32-34,36,38,40,42-48,51-55,57,58,86-93,98,99,101,102,104,105 and 107.